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ABSTRACT

Two major strategies for linguistically encoding an idea or proposition are suggested. The first strategy involves encoding an idea in the space of a single utterance, while the second strategy conveys the proposition through a sequence of two or more utterances. The tendency has been to focus on discourse as a composite of sentences (the first strategy) rather than on its role as an alternative to the sentence. The extent to which speakers rely on one strategy or the other is both situation-specific and language-specific. It is proposed that languages may differ in the extent to which they use discourse for conveying a single proposition and that this is linked to communicative strategies employed by the language-learning child. The discussion focuses on the sequential strategy for encoding a proposition, from a functional perspective. First, the pragmatic functions performed by each utterance are evaluated, i.e. its role as an attention-getting device, an acknowledgment, etc. Second, the logical function of each utterance within the sequence is considered, i.e. its role as argument, predicate, modifier, etc. The findings demonstrate the importance of considering the proposition rather than the utterance as a natural unit and they provide an alternate measure for assessing the child's level of linguistic competence. (Author/NCR)

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PROPOSITIONS ACROSS UTTERANCES AND SPEAKERS

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I. INTRODUCTION

In this paper we suggest two major strategies for linguistically encoding an idea or proposition. The first strategy involves encoding an idea in the space of a single utterance. For example, a speaker using this strategy might use a sentence to express a proposition. In the second strategy the proposition is conveyed through a sequence of two or more utterances. Let us illustrate this difference. For example, it is possible for a speaker to report an event as follows: Tom wasn't in class today because his car broke down. Here, the speaker uses syntactic means, a subordinate conjunction, to express a cause-effect relationship in a single sentence. On the other hand, the speaker could have opted for a sequential expression of the proposition. For example, the speaker could have said: Tom wasn't in class today. His car broke down. Here, the cause-effect relationship is conversationally implied (Grice 1968) rather than expressed through overt syntactic means. That is, the hearer infers a cause-effect relationship between the two sentences because he assumes that the second utterance is in some way relevant to the first.

Although both these strategies are utilized universally, only the first of these strategies, the use of a single utterance, has been acknowledged as a basic means of encoding a proposition. For example, within linguistics, the sentence rather than discourse has been treated as the primary vehicle for expressing propositions. The focus has been on formal differences that distinguish sentences from discourse, rather than on the functional similarities between the two. That is, the tendency has been to focus on discourse as a composite of sentences, rather than on its role as an alternative to the sentence.

The extent to which speakers rely on one strategy or the other is both situation-specific and language-specific. One example of situation specific variation is the difference between unplanned and planned speech in English. The former is characterized by a heavier reliance on discourse strategies (Keenan and Schieffelin 1976), while the latter is characterized

by greater use of a single sentence to convey a proposition. Similarly, recent work suggests that languages may differ in the extent to which they use discourse means for conveying a single proposition. For example, in so-called topic-prominent languages, (Li and Thompson 1976) the topic is specified initially but may be deleted in subsequent relevant predications. In these cases, speakers rely on the discourse history to make their utterances intelligible and meaningful.

We propose that these differences across situations and languages are linked to communicative strategies employed by the language-learning child. Young children, like adults, convey propositions through both single utterances and sequences of utterances. This difference has in part been captured by Bloom (1973) in the distinction between holistic and chained single-word utterances. In holistic utterances, a single proposition is encoded over two or more successive utterances. Each utterance expresses one component of the proposition: the argument, predicate, modifier, etc.

(1) Allison III: 20 mos. 3 wks.
(M had suggested taking off A's coat)
(A pointing to her neck)
What? — up/ up/
Neck? What do you want? What? — neck/ up/
What's on your neck?
(A pointing to zipper and lifting up her chin) — zip/ zip/ up/

Chained utterances, on the other hand, express a series of discrete propositions. Typically, each utterance encodes a separate event or action.

(2) Allison II: 19 mos. 2 wks.
(A pushes truck past M, off rug; stands up) — uh!/
back/
(A pulling truck back onto rug)
Back.
(A struggling to pull truck onto rug) — up/
Off?
(A getting truck onto rug) — there/ up/
On?
(A pulling truck closer) — on/
(A standing up) — there! /

That children rely heavily on both single utterances and sequences of utterances to convey a proposition is supported by the more recent research of Scollon (1974), Atkinson (1974), Griffiths (1975), Keenan and Klein (1975) and Keenan and Schieffelin (1976).

In the discussion to follow, we focus on the sequential strategy for encoding a proposition, from a functional perspective. First, we evaluate the pragmatic functions performed by each utterance, i.e. its role as a noticing, an attention-getting device, an acknowledgment and so on. Second,

we consider the logical function of each utterance within the sequence, i.e. its role as argument, predicate, modifier and so on.

Most studies have focused on the child as the sole producer of sequentially encoded propositions. However, our data show that quite often both caretaker and child jointly encode propositions in this way. Further, we find that caretakers themselves rely heavily on this strategy in speaking to children. The presence of this strategy in caretaker speech helps to explain certain observed characteristics of caretaker speech, for example, the high frequency of interrogatives (Savič 1976, Snow 1973, Newport 1974, Ervin-Tripp 1975, and Holzman 1972, 1975).

Our findings have certain methodological and theoretical implications for language development: (1) They demonstrate the importance of considering the proposition rather than the utterance as a natural unit. (2) They provide an alternate measure for assessing the child's level of linguistic competence. Specifically, we see competence as a move away from sequential organization towards syntactic organization of propositions. This has been described by Scollon (1973) as a move from vertical constructions to horizontal constructions. (3) Our observations show yet another way in which caretakers adjust their speech to young children (Ferguson 1974, Newport 1974) and why they do so.

II. DATA BASE

Our data base consists of three major sources: (1) transcripts of six 30-minute videotapes of a child, Allison (from age 1;4 to 2;10), interacting with her mother. The first four of these tapes have been analyzed by Bloom in One Word at a Time (1973). (2) transcripts of audio and videotapes of twins, Toby and David (from age 2;9 to 3;0), interacting with one another and with a caretaker. These data have been previously analyzed in Keenan (1974, 1975), Keenan and Klein (1975), Keenan and Schieffelin (1976). (3) transcripts of three children, aged 2;0, interacting with their caretakers (from the UCLA Infant Studies Project).

III. THE PRAGMATIC FUNCTIONS OF PROPOSITIONAL SEQUENCES

In examining the pragmatic work performed by the child at each step in the propositional sequence, we draw heavily on the work of Atkinson (1974), Griffiths (1974), Keenan and Klein (1975) and Keenan and Schieffelin (1976).

The sequential construction of a proposition involves some or all of the following steps, any of which may be repeated within the sequence:

1. Speaker evidences notice of some entity (X)
2. Speaker attempts to get Hearer to notice X
3. Hearer evidences that she has noticed X
4. Speaker or Hearer provides or elicits additional information about X

The various possible combinations of steps are illustrated in Figure 1.

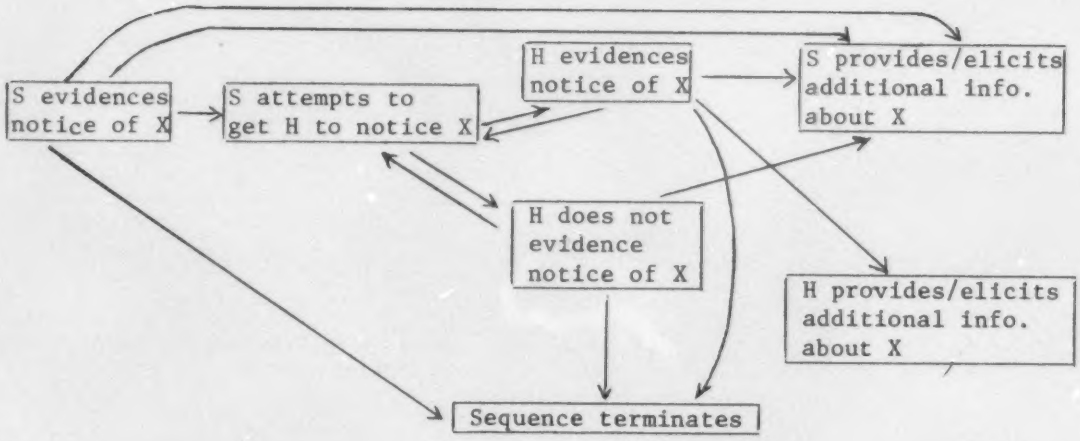
S evidences notice of X
S attempts to get H to notice X
H evidences notice of X
S provides/elicits additional info. about X
H does not evidence notice of X
H provides/elicits additional info. about X
Sequence terminates

Figure 1. Possible combinations of steps in a propositional sequence

At one extreme, it is possible for a speaker to comment on something directly after she has overtly indicated that she has noticed it. At the other extreme, the expression of the proposition may involve all four steps. Example (3) illustrates such a sequence.

(3) Toby and David, 35 mos.

T:	Ee* nother moth/	Step 1 (deictic + name)
	Ee/	Step 2 (deictic)
	Ee nother moth/	Step 2 (deictic + name)
	(more emphatic)	Step 2 (prosodic)
	Ee nother moth/	Step 2 (deictic + name)
D:	Ee nother moth/	Step 3 (repetition)
T:	I see two moths/	Step 4
	two moths/	Step 4

*Ee = deictic adverb ('there')

We turn now to a more detailed discussion of these steps.

STEP 1: SPEAKER EVIDENCES NOTICE OF X

This step is a prerequisite condition for the completion of any subsequent steps (Atkinson 1974). We cannot imagine, for example, an attempt to get the addressee to notice an object that does not entail the speaker having noticed the object. Similarly, it does not make sense to talk about a speaker providing or eliciting predications concerning an object which she has not noticed. In many cases, the noticing is not overt. Or, the child may display her noticing through nonverbal means, such as pointing or shift in gaze toward an object, and/or verbal means such as use of: a name (e.g. "horse"), as in example (4):

(4) Allison II: 19 mos. 3 wks.
(A reaching in box)
Horse — horse/
big/

a deictic pronoun or adverb (e.g. "that", "there", "ee"):

(5) G, 31 mos. (Griffiths 1974)
(G pulls large doll to bits, small doll falls out)
that/
(G holds up small doll)
that baby hide/ again/

an expressive particle (e.g. "uh oh", "oh dear"):

(6) Allison III: 20 mos. 3 wks.
(A noticing that mother's juice has spilled) — uh oh/
Uh oh.
(A smiling, looking at juice spilled on floor) — mommy/
What did mommy do?
spill/

or greeting term:

(7) Toby and David, 33 mos.
(D wakes up and sees toy pig on floor)
hello/
d^/ (6x)
de du/
(D leans over bed)
piggy fall down/

The "conversational life-span" of a noticing depends on certain characteristics of the situation. One of the most important of these variables is the extent to which a conversational partner is attending to the speaker and/or what has been noticed by the speaker. Very often highly attentive caretakers provide immediate uptake on the child's noticing. The caretaker evidences that she has also noticed what the child has noticed, whether or not the child intended to elicit such a response. Example (4) illustrates such a sequence.

STEP 2: SPEAKER ATTEMPTS TO ELICIT NOTICE FROM HEARER

Where the hearer is less attentive and where the child wants the hearer to notice something, the child may perform additional communicative work, that is, step 2.

We find that the work of drawing the attention of the hearer to the object noticed is accomplished through either or both of two strategies, summarized in Table 1:

TABLE 1

Attention-getting strategies and means for expressing them

STRATEGY 1: more than one of the following:		STRATEGY 2	
Nonverbal	Verbal	Nonverbal	Verbal
1. pointing 2. looking at object	1. name 2. deictic pronoun or adverb 3. expressive particle 4. greeting term	1. touching hearer a. pulling b. tugging c. tapping 2. showing X to hearer, holding up X 3. giving X to hearer 4. initiating eye contact 5. movement toward hearer	1. vocative 2. locating directives e.g. 'look at X', 'see X' 3. interrogatives 4. prosodic devices a. whining b. screaming c. increased pitch/ amplitude d. whispering

ATTENTION-GETTING STRATEGY 1: Repeat step 1, speaker evidences notice of X.

We find that the child will often try to get the hearer to notice what she has noticed by either repeating her own original noticing and/or using another form of noticing. Examples of a repetition of an original noticing are:

(8) repeat an expressive particle:

G, 20 mos. (Griffiths 1974)
(Adult finds picture of a car)
(G takes book)
ooh/ oh/
mummy/

(9) repeat a name:

Toby and David, 35 mos.

(D is holding up toy truck and rabbit, T is whistling on a pretend flute while facing D)	Step 2 (holding up X, Y)
D: rabbit/ rabbit/	Step 2 (name)
I find truck/	
rabbit/	Step 2 (name)
he was like rabbit/	
(very high voice,	Step 2 (prosodic)
shows truck and rabbit to T)	Step 2 (showing X)
truck rabbit/ (7x)	Step 2 (name)
T: truck/	
rabbit/	

Further examples can be found in Scollon (1973), Radulovic (1976), Griffiths (1974) and Atkinson (1974).

ATTENTION-GETTING STRATEGY 2: Use a communicative device primarily designed to elicit the attention of the addressee.

Here, the child uses means which are overtly directed toward an addressee. They include both nonverbal and verbal means. Nonverbal means include touching the hearer (e.g. pulling, tugging, tapping), showing something to the hearer, giving something to the hearer and initiating eye contact with the hearer. Verbal means include use of a vocative, locating directives (e.g. "Look at X", "See X"),

(10) G, 20 mos. (Griffiths 1974)

(G takes plastic horse from tin which he has just opened)	Step 1 (looking)
see/ see/	Step 2 (locating directive)
(G takes plastic cow from tin)	
see/ see/	Step 2 (locating directive
Mo: It's a cow.	

(11) Ronald, 24 mos. (Tweed 1976)
R: look/ look/
Mo: You want that?
R: tray/
Mo: Ashtray. You stay out of it.

interrogatives, and various prosodic or paralinguistic devices (e.g. whining, screaming, increased pitch/amplitude, whispering, etc.).

These two strategies account for the bulk of the attention-getting devices in our data. We find that a speaker may use one strategy exclusively or combine the two strategies. Examples (12) to (14) illustrate possible combinations of devices used to secure the attention of the listener. For example, the speaker may hold up an object for the hearer (strategy 2, nonverbal) while repeating the name of the object noticed (strategy 1, verbal):

(12) Brenda, 19 mos. (Scollon 1973)

(B held up mother's shoe and looked at it)	Step 2, strat. 2 (holding up X)
	Step 2, strat. 1 (looking at X)
mama/ mama/ mama/ mam/	Step 2, Strat. 1 (name)
ś/ śI/ ś/ śis/ šu/ šu/ šus/	Step 2, strat. 1 (name)

Or the speaker may combine a vocative or locating directive (strategy 2, verbal) with a deictic, name and/or expressive particle (strategy 1, verbal):

(13) G, 35 mos. (Griffiths 1974)

(G has been handed a toy train by another adult)	
mummy/	Step 2, strat. 2 (vocative)
choo choo/	Step 2, strat. 1 (name)
mummy/	Step 2, strat. 2 (vocative)
(G holds up train to mother)	Step 2, strat. 2 (holding up X)
mummy/	Step 2, strat. 2 (vocative)
Mo: What's that?	

(14) Toby and David, 33 mos.

D: (high voice)	Step 2, strat. 2 (prosodic)
See it/	Step 2, strat. 2 (loc. direc.)
A B C/	Step 2, strat. 1 (name)
See it/	Step 2, strat. 2 (loc. direc.)
See/	Step 2, strat. 2 (loc. direc.)
A B C/	Step 2, strat. 1 (name)
Look/	Step 2, strat. 2 (loc. direc.)
T: Oh yes/	Step 3 (confirmation)
D: A B C in 'ere/	Step 4

STEP 3: HEARER EVIDENCES NOTICE OF X

When a hearer evidences that she has noticed or is aware of X, she indicates that some object or state of affairs is now a mutual focus of attention. From this point on, the interlocutors can assume that the object or state of affairs in question is a piece of old or <u>definite</u> information. We find that definiteness is achieved through any of the following means:

1. Repetition of part or all of a prior turn

a. partial repetition

(15) Toby and David, 33 mos.
(T and D in kitchen with nanny)
Jill: And we're going to cook sausages.
T: cook sausage/

(16) Toby and David, 33 mos.
T: is piggy/ oh/ piggy's/ oh/
I got feathers!/ oh/
D: got feathers/ got feathers/
baby one/
feathers one/
big one/ big one/

2. exact repetition

(17) Toby and David, 35 mos.
(D slides back and sits on his bed)
(alarm rings)

D: oh/ oh/ oh/	Step 1 (expressive particle)
bell/	Step 2 (name)
T: bell/	Step 3 (repetition)
D: bell/	
it's mommy's/	Step 4

2. Expansion

(18) Allison II: 19 mos. 2 wks.
(A crawling into mother's lap and
pointing to microphone man/
The man put the microphone on.

(19) Ronald, 24 mos. (Tweed 1976)
(R and mother playing with dog, "Sheshe")
R: yard/
mom/
Mo: What?
R: yard/
Mo: Yard. Yeah, Sheshe's out in the yard.

3. Predication relevant to X

To understand this third strategy, we must turn to a discussion of the last step.

STEP 4: SPEAKER OR HEARER PROVIDES OR ELICITS ADDITIONAL INFORMATION ABOUT X

We noted earlier that the speaker's attempt to get the hearer to notice X entails the speaker having noticed X. A similar relationship exists between the hearer evidencing notice of X and the hearer predicating something of X. That is, in predicating something of X, the hearer evidences that she has noticed X. We find that in both child-child and child-adult discourse, that step 3 may be accomplished <u>separately</u> from step 4, i.e. in a separate utterance, or as <u>part</u> of step 4, i.e. in the same utterance.

Example (20) illustrates a case in which step 3 is accomplished separately from step 4.

(20) Toby and David, 33 mos.
(T has noticed a ribbon on toy pig)
T: like that/
got ribbon/ got ribbon/
D: ribbon/ Step 3 (repetition)
on piggy/ Step 4

The hearer evidences his notice of X (the ribbon) through a repetition of the prior turn. Then in a subsequent utterance, the hearer provides a further predication of X (on piggy). This example is taken from child-child discourse. However, a very similar process occurs in caretaker-child discourse. The adult may repeat exactly or expand the child's utterance in one utterance and only then go on to provide/elicit additional information about what the child has noticed. Example (21) illustrates this type of sequence.

(21) Allison II: 19 mos. 2 wks.
(A pointing to box) box/
Box. What do you think is in that box?

As noted previously, a hearer may collapse steps 3 and 4 in a single utterance or turn by providing or eliciting additional information about the previous speaker's focus of attention. For example, if a hearer confirms or disconfirms what the previous speaker said, this constitutes an acknowledgment of what was said. Examples (14), above, and (22) and (23) illustrate this.

(22) Toby and David, 34 mos.
(T and D eating spaghetti)
D: skabetis/
T: no skabetis/ makaronis/

(23) Angelique, 24 mos. (Tweed 1976)
A: my hand/
no soap off my arm/
Mo: Yes.
A: soap off/

Similarly, a hearer may acknowledge what was noticed by simply reporting that he "sees" or "knows" or "remembers", etc. the object or state of affairs. We call these predications REPORTS OF NOTICING:

(24) Toby and David, 35 mos.
(T and D have been throwing blankets at each other)

(D leans over bed and sees battery on floor)	Step 1 (looking)
(D getting battery)	
D: it's a battery/	Step 1 (name)
T: no/ (reference to prior event, not relevant)	
(D stands facing T, in bed, holding battery)	Step 2 (holding up X)
D: a a battery/	Step 2 (name)
this is battery/	Step 2 (name)
this is battery/	Step 2 (name)
look/	Step 2 (loc. direc.)
I find battery/	
T: I see/	Step 3/4 (report of noticing)
that Jiji's/	Step 4

Finally, most relevant questions and assertions provided by the hearer evidence that the hearer is aware of his conversational partner's noticing.

(25) Ronald, 24 mos. (Tweed 1976)
(car coming down street)
R: dat/
Mo: What is that?
R: car/

(26) Angelique, 24 mos. (Tweed 1976)
A. mommy doll here/
(?)/
mommy button off/
mommy button off/
button off/
Mo: Ok, just a second. You want to take it off?
A: uh huh/

Thus far we have been stressing the similarities between sequential and simultaneous means of carrying out steps 3 and 4. However, there are critical differences as well that need to be pointed out. One of the major differences lies in the extent to which syntactic and semantic means are used to display step 3. When a hearer provides a relevant predication

about the item noticed, he often uses syntax to express that the item is old information for both speaker and hearer. For example, the hearer may refer to the item noticed through an anaphoric pronoun, a definite article, a relative clause and so on. In other cases, the hearer uses the operation of DELETION to express definiteness. For example, when the hearer follows a noticing or attention-getting device with "yeah" or "no" or "I see", he is assuming that the deleted information is known to the addressee as well as to himself.

When a hearer carries out step 3 by repeating the prior speaker's utterance, he is not using syntactic means to achieve definiteness. Definiteness is achieved interactionally (or pragmatically) rather than syntactically. The use of repetition to achieve definiteness anticipates the use of syntactic means to achieve the same end, as demonstrated in Keenan (1975): at 33 months Toby and David relied heavily on repetition to acknowledge one another's utterances; by 36 months repetition declined dramatically and the use of definite articles and anaphoric pronouns increased.

That this is the case suggests that turn repetition is a mechanism for learning how to express or mark definiteness. Interesting in this light is the fact that syntactic means for expressing definiteness follow turn repetition not only developmentally but sequentially in the conversational discourse itself. For example, in (17) the pronoun "it" is used to refer to the bell only after "bell" has been repeated by the hearer. Similarly in (21) above, the demonstrative adjective "that" is used after the noun it modifies has been uttered by one speaker and repeated by another. In both these cases, definiteness is first achieved interactionally and then expressed syntactically. The child may come to associate the two means and eventually rely less heavily on repetitions to mark the transition to old information.[1]

Before completing our discussion of step 4, we must point out that the speaker who noticed some object or state of affairs may carry out step 4. We do not wish to give the impression that the hearer alone provides relevant predications and inquiries. Further, just as the uttering of a relevant predication implies that the hearer has noticed X, so the uttering of a relevant predication by the prior speaker implies that the speaker has noticed X. Thus step 4 may count as a noticing (i.e. as step 1). As such it takes on all the properties of step 1. For example, it may be combined with another type of noticing and then constitute an attempt to get the hearer to notice (step 2) and so on.

IV. LOGICAL ORGANIZATION OF A PROPOSITIONAL SEQUENCE

We would now like to link these steps to the logical organization of a propositional sequence. Propositions consist of a major argument and a predication about that major argument. As noted in our introduction, these two components may be produced in a single utterance or produced across a sequence of utterances. Looking at the examples provided thus far, we can see that there are many cases of the sequential strategy.

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[1] We do not mean to suggest that this is the only means for acquiring understanding of definiteness and how to mark it.

Typically, an object noticed in one turn becomes a major argument of a predication expressed in a subsequent turn. For example, in (20), the object noticed, "ribbon", becomes the argument of the subsequent predicate "on piggy". Similarly, in (4) the object noticed by Allison, "horse", becomes an argument of the subsequent predication "big". We say "becomes the argument of the subsequent predication" to avoid suggesting that the child intends the object noticed to be an argument of a proposition at the time it is actually noticed. In some situations that may be the case: the child may have a proposition in mind at the time the object noticed is referred to. In other cases, however, this is far too rich an interpretation. It is more likely that the child first simply notices something and only subsequently treats it as an argument.

V. SEQUENTIAL ORGANIZATION OF CARETAKER SPEECH

Though we have thus far discussed the sequential expression of propositions only with respect to the child, it is clear from our data base that the sequential strategy is heavily relied upon also by caretakers interacting with young children.

We feel that this strategy is linked to the pragmatic functions outlined above, in particular, to step 2 (attempts by the speaker to get the hearer to notice something: an object, a state of affairs, etc.). Thus the caretaker often points out something for the child to attend to in one turn (step 2) and only subsequently is a relevant predication produced (step 4).

The reason caretakers break down their propositions in this way is fairly straightforward. Caretakers cannot always be certain that the child is attending to or is aware of what they want to talk about. The child may be absorbed in her own activity, or may simply not want to cooperate and interact with the caretaker. Even in cases where the major argument has been previously mentioned by the caretaker, the child may not have been attending or may not remember the argument. In these situations, the caretaker may take steps to ensure that the child has noticed the major argument.

We find that caretakers draw on the same verbal and nonverbal devices as the child to carry out this communicative task. Like the child, they use vocatives, repetition, interrogatives, pointing, holding up objects and the like.

INTERROGATIVES: PRAGMATIC FUNCTIONS

In this paper, we would like to discuss only one of these devices, the interrogative. It has been frequently observed that caretaker speech has an extremely high percentage of interrogatives, relative to adult-adult discourse. Recent studies (Scollon 1973, Corsaro 1974) indicate that interrogatives may account for up to 50% of the adult corpus. We suggest that such a high percentage is linked to the need to carry out the pragmatic work outlined above. Specifically, the interrogative functions to draw the child's attention to something the caretaker wants noticed (Atkinson 1974). The something to be noticed may be a concrete object as in examples (27) through (30).

(27) Allison I: 16 mos. 3 wks.
Mo: You know what Mommy has? I have something you've never seen before. We have some bubbles. Would you like to have some bubbles? Remember bubbles in the bath?
(A and M walk away; M gets bubble liquid; M sits down on floor)

(28) Allison V: 28 mos. (Mother putting microphone on A)
Mo: You know what this is called?
A: Something/
Mo: See, it's a microphone. There.

(29) Allison II: 19 mos. 3 wks.
Mo: Do you think there's another baby in your bag? Allison.
(A steps in truck but looks toward bag)
Mo: Do you think there's another baby in your bag? Go get the bag.
(A goes to bag, pulling out another doll) more/
there/
there/
Mo: There.

(30) Allison I: 16 mos. 3 wks.
Mo: (holding cookies) What's Mommy have?
A: cookie/
Mo: Cookie! Ok. Here's a cookie for you.

an action or event, as in example (6), above, and in (31),

(31) Angelique, 24 mos.
(A and C constructing toy with felt and glue)
C: Stick it like this and then it'll stay on.
See that?
Do it like this.
Angelique, when it comes off, put it back on. Like this.
A: (A's hand is sticky)
mommy/
my hand/

or a concern or principle as in examples (32) and (33).

(32) Toby and David, 33 mos.
Jill: I gotta write a wedding card. What shall I put?
D: yah/
Jill: Love from Jiji?
D: yah/
Jill: What will we put?
T: love (?) Jiji/
Jill: What?
T: love from Jiji/
Jill: Love from Jiji.

(33) Angelique, 24 mos.
Mo: You know what I'm afraid? You're goin' to ruin that doll with that puttin' water on her. Let's get a water doll.

We may ask why the interrogative is an effective attention-getting device. Interrogatives frequently function as requests, and as such, normally oblige the hearer to produce a relevant next utterance. To meet this obligation, the hearer minimally must have attended to the interrogative. Thus, interrogatives signal to the hearer that she should attend to what is being said, because she may be expected to provide a relevant response.

In using interrogatives, caretakers exploit either the obligation to attend or the obligation to respond relevantly. In many cases, the caretaker uses the interrogative only as an attention-getting device, as a preamble to some predication the caretaker wants to make. This is the case in example (27). Here, the caretaker wants to predicate something of the object she is attending to. She uses the interrogative "You know what Mommy has?" to draw the child's attention to that object (step 2) and in subsequent utterance, provides new information about that object (i.e. "I have something you've never seen before. We have have some bubbles." (step 4).

Breaking down interrogatives into their functional properties helps to explain other observed features of child and adult language. First, it has been observed by Atkinson (1974), Griffiths (1974), and Carter (1975) for first language acquirers and by Gough (1975) and Gough and Hatch (1975) for second language acquirers, that young children frequently use interrogatives other than as requests. For example, Atkinson reports a child using the interrogative "What's that pussy" while looking at a picture of a cat. We find similar examples in the data used in this study. Allison at 28 months looks at the videomonitor and says "where Allison right there". This is also illustrated in example (34).

(34) Toby and David, 35 mos.
(D rolling battery across T's pillow, T sucking thumb)
D: it's comin'/ (3x)
up there it's comin'/
steamroller's comin'/
up and eeeuuuu/
what Toby up so high there/
up top/

In these utterances the child appears to be using the interrogative inappropriately. He appears to be asking a question he has answered in a prior utterance or is answering in the same utterance. In fact, the child is using the interrogative in much the same way the caretaker uses it. He is using it as an attention-getting device. As Atkinson points out, the interrogative pronoun could be replaced by some locating verb such as "look at" or "see" without changing the function of the utterance. For example, "what Toby up so high there" could be paraphrased as "look, Toby up so high there", and so on.

VI. LOGICAL FUNCTION OF INTERROGATIVES

We have discussed some of the pragmatic functions of interrogatives. We turn now to the logical role of interrogatives in the sequential expression of a proposition. We have noted previously that propositions

may be built up sequentially by following a step 2 or step 3 utterance with a step 4 utterance. Something the speaker notices or the hearer notices becomes the major argument of one or more subsequent predications. These predications may be produced by either speaker or hearer. In our previous discussion, we noted only cases in which names or deictics become major arguments. However, interrogatives can fill this role as well. They may function as arguments of subsequent relevant responses. The interrogative-response pair can be reinterpreted as an argument-predicate construction. For example, in (30), "What's Mommy have? cookie/" forms such an argument-predicate construction. The interrogative "What's Mommy have?" becomes the argument for the subsequent predication "cookie". The interrogative and the response together make the claim "the something that Mommy has is a cookie."

In cases such as (30), the caretaker provides the argument and the child provides the relevant predication. That is, caretaker and child <u>together</u> construct a single proposition. We suggest that a child may learn how to articulate propositions through such a mechanism. That is, she may learn how to encode propositions by participating in a sequence in which she contributes a component of the proposition. This process is explicit in example (32). Interrogatives are highly instrumental in this process, and this function may provide yet another explanation for the high percentage of interrogatives in caretaker speech.

The role of the interrogative as a major argument helps us to understand as well the children's interrogatives presented above, that is, utterances such as "what Toby up so high there" and "where Allison right there". In these constructions, the child is merely combining in a single utterance what could be expressed sequentially. The interrogative pronoun functions not only pragmatically to elicit attention but logically to present the major argument.

VII. PROPOSITIONS AS NATURAL UNITS

In conclusion, we argue that the proposition ought to be the basic semantic unit in developmental studies of language. Taking the proposition as a workable unit, we then can trace the relationship between propositions and utterances. We may ask: To what extent is a child able to encode the proposition he wishes to convey in a single utterance? To what extent is the proposition inferred from context? Which dimensions of the utterance context (verbal and/or nonverbal) does the child exploit?

Further, in attending to the importance of the proposition rather than the utterance, we may assess more accurately the semantic roles of constituents within utterances. We suggest that semantic analyses, whether they be concerned with case, old/new information, or argument-predicate, require systematic consideration of the discourse environment and the situational environment of the utterance. For example, out of context, it is often difficult to determine whether an utterance encodes some argument about which a predication will be made in a subsequent utterance or whether the utterance encodes a predication relevant to some thing seen, heard, felt but otherwise not verbalized. Likewise, whether or not

some constituent is a piece of old or new information may rest in its position in a sequence of utterances. It has been taken for granted that such information about the illocutionary and perlocutionary functions of an utterance can be obtained from its position in a discourse, e.g. whether it is a pre-disagreement, a disagreement, a grant of a request, a request and so on (Schegloff, Jefferson and Sacks 1976). However, discourse has not been considered seriously as a source for understanding fundamental logical and pragmatic functions of utterance constituents.

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